

2.0 THE PIT STOP SITE - 305 ISLETA BOULEVARD SW NMED Facility Number 24299001

2.1 INTRODUCTION/SITE HISTORY

Based on a comprehensive review of available historical data, past Site knowledge, and completion of a detailed site inspection, FEI/TPA completed the following Site summary. In addition, detailed maps were constructed summarizing known site conditions and are presented as Figures 2A and 2B.

- This Site was initially investigated by the Bernalillo County Environmental Health Department (BCEHD) during the early phases of their Technology Deployment Initiative (TDI). Tanks were first identified at the Site after a combined magnetometer and ground penetrating radar survey was conducted for BCEHD by Sage Earth Sciences. In their report, "RGS Surveys, Suspect Tank Sites, Isleta Blvd – Albuquerque, NM" dated September, 1997, Sage Earth Sciences identified at least one suspect UST at the site.

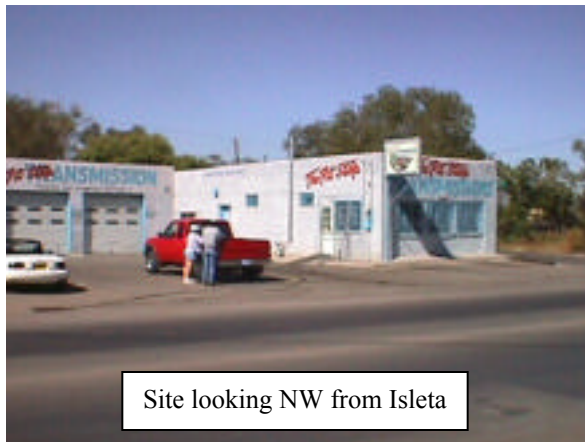


- On April 1 and 2, 1998, three USTs were removed from the ground. During UST removal activities, one 1,000-gallon gasoline tank and two 750-gallon tanks were found, which are believed to have been leaded gasoline tanks. A fourth tank, a 2000-gallon suspected oil tank, was also found. It was pumped out and closed in place by filling it with concrete. Soil and ground water samples were collected in the excavation pits and generally showed elevated TPH concentrations (11,000 mg/kg) adjacent to the oil tank and lower TPH concentrations (100 to 240 mg/kg) beneath the other tanks which were removed.
- During the tank excavation activities, approximately 250 gallons of a product/ground water mix were removed from the tank excavations and disposed of off-site. No other remedial activities have been conducted at the site.
- Subsequent investigation by FEI has shown that soil and ground water contamination is still present at the site and will require additional active remediation. Figures 2A and 2B provide soil and ground water contaminant extent at the Site. Additional details regarding these recent investigations are available in the *Site Investigation Report, The Pit Stop, 305 Isleta Blvd. SW*, FEI, September, 1999.

- During FEI's Investigation, a total of 12 soil borings and 7 monitor wells were advanced at the Site to depths of between 8 and 20 feet below ground surface (bgs) at the locations shown on Figures 2A and 2B. Hollow-stem auger (HSA) drilling techniques were used. Site lithology, as observed in retrieved split-spoon samples and soil cuttings, can generally be classified as near surface (< 3 to 4 ft. bgs) silts and silty sands which grade with depth to fine-to-medium grained sands with localized medium-to-coarse gravelly sand lenses. The sand zone at the water table contains the majority of the adsorbed-phase residual petroleum hydrocarbons.
- During the Investigation, water saturated conditions were generally first encountered in boreholes and monitor wells at depths ranging between approximately 11 to 12 feet. Depth to ground water measurements collected from the monitor wells in March, June and September 1999 indicates that the potentiometric water surface slopes to the south/southwest at a gradient of approximately 0.0015 feet/foot. Based on grain size distributions of selected soil samples, the hydraulic conductivity (K) of the upper portion of the saturated zone is approximately 1500 gpd/ft.
- Twelve (12) soil borings were advanced at the Site between February, May and June, 1999 using a CME-55 hollow-stem auger (HSA) drill rig supplied and operated by Rodgers Drilling, Inc. Seven of the borings were completed as monitor wells MW-1, MW-2, MW-3, MW-3D, MW-4, MW-5 and MW-6. The remaining soil borings were backfilled with activated bentonite and bentonite-cement grout following completion.
- During drilling activities, retrieved sediment samples were collected from the boreholes and analyzed in the field for Total Ionizable Volatile Compounds (TIVC) using either a Thermo-Environmental Instruments Model 580-B PID or a RAE-2000 PID, both of which utilize a 10.6 eV lamp. At each drilling location one or more sediment samples were also collected using the USTR Methanol Extraction Method for gasoline range hydrocarbons and standard methods for diesel and oil range hydrocarbons and were sent to Pinnacle Laboratories, Inc. for analyses. Laboratory samples were analyzed for Total Petroleum Hydrocarbons (C₆-C₃₆ carbon range) using EPA Method 8015 (modified) and BTEX and MTBE using EPA Method 8021.
- Select samples were also collected for analysis of Total Organic Carbon (TOC), grain size, percent moisture, clay content/plasticity, and heterotrophic bacterial population counts.
- On March 2, 1999 and June 10, 1999, FEI sampled ground water monitor wells at the Site. Prior to ground water sampling, depth to water was measured in each well with an electronic water level meter accurate to +/- 0.01 feet. Each well was then developed and purged by removing greater than or equal to three well volumes of water using a Grundfos sampling pump. Ground water samples collected by FEI were submitted to Pinnacle for analysis of BTEX, MTBE, EDC, and TMBs using EPA Method 8260, for EDB using EPA Method 504.1, and for naphthalenes by EPA Method 8270 (SIMS) and 8310. All groundwater samples collected for 8260 analysis were placed in 40-ml glass vials with teflon-lined lids. Sample vials were pre-preserved with an eight milligram/liter (mg/l)

solution of mercuric chloride to prevent sample degradation.

- Results of the investigation indicate that residual hydrocarbon contamination exists primarily as sorbed-phase TPH (primarily in the C₆ to C₁₀ and C₁₀ to C₂₂ hydrocarbon range – weathered gasoline and possibly diesel) in a medium grained sand layer lying at a depth of approximately 10 to 12 feet bgs.
- Low levels of BTEX components found in the ground water (except MW-1, which had a thin PSH sheen) in comparison to the residual TPH found in the overlying soils suggest that the leak is old and is probably reflective of a site that is reaching a mature stage of natural attenuation and is either shrinking in size or is in a state of hydrodynamic equilibrium.
- Although some residual contamination is apparent under the existing retail business buildings and under the Isleta Blvd. right-of-way, the majority of the contaminant mass appears to exist under the parking area between the on-site buildings and the right-of-way.
- Residual spill mass estimates indicate that approximately 5,000 pounds of hydrocarbons are present in the Pit Stop plume, primarily in the form of adsorbed-phase soil contamination.



Site looking NW from Isleta

2.2 RECOMMENDED ACTIONS

Task One – Site Review and Work Plan Development

This task provides for the review of FEI and NMED/USTB files, site mapping and photography, review of historic ground water and soils data, and final preparation of this work plan for additional investigation.

Task Two – Sample Existing Wells and Conduct Three Additional Quarterly Sampling Rounds

Groundwater in all usable wells will be sampled during an initial event for organic parameters including BTEX, MTBE, EDC, EDB, and naphthalene using EPA Method 8260. The following natural attenuation indicators will also be sampled for using field test kits: dissolved oxygen (DO), nitrate (NO₃), dissolved and total iron (Fe), alkalinity (HCO₃/CO₃), phosphate (PO₄), and sulfate (SO₄). Additional field tests will include pH, temperature, and conductivity. FEI/TPA will provide NMED/USTB and BCEHD 48-hour notification prior to initiating any sampling.

We also propose three additional quarters of ground water sampling for BTEX, TMB, EDB, EDC and MTBE using EPA Method 8021 (EDX) and for the above natural attenuation indicators. We propose sampling 7 wells in the second, third and fourth quarters. Ground water levels will be measured prior to sampling. Quarterly reports will be submitted according to the requirements of USTR §1216.

Task Three - Conduct AS/VE Pilot Test (Optional)

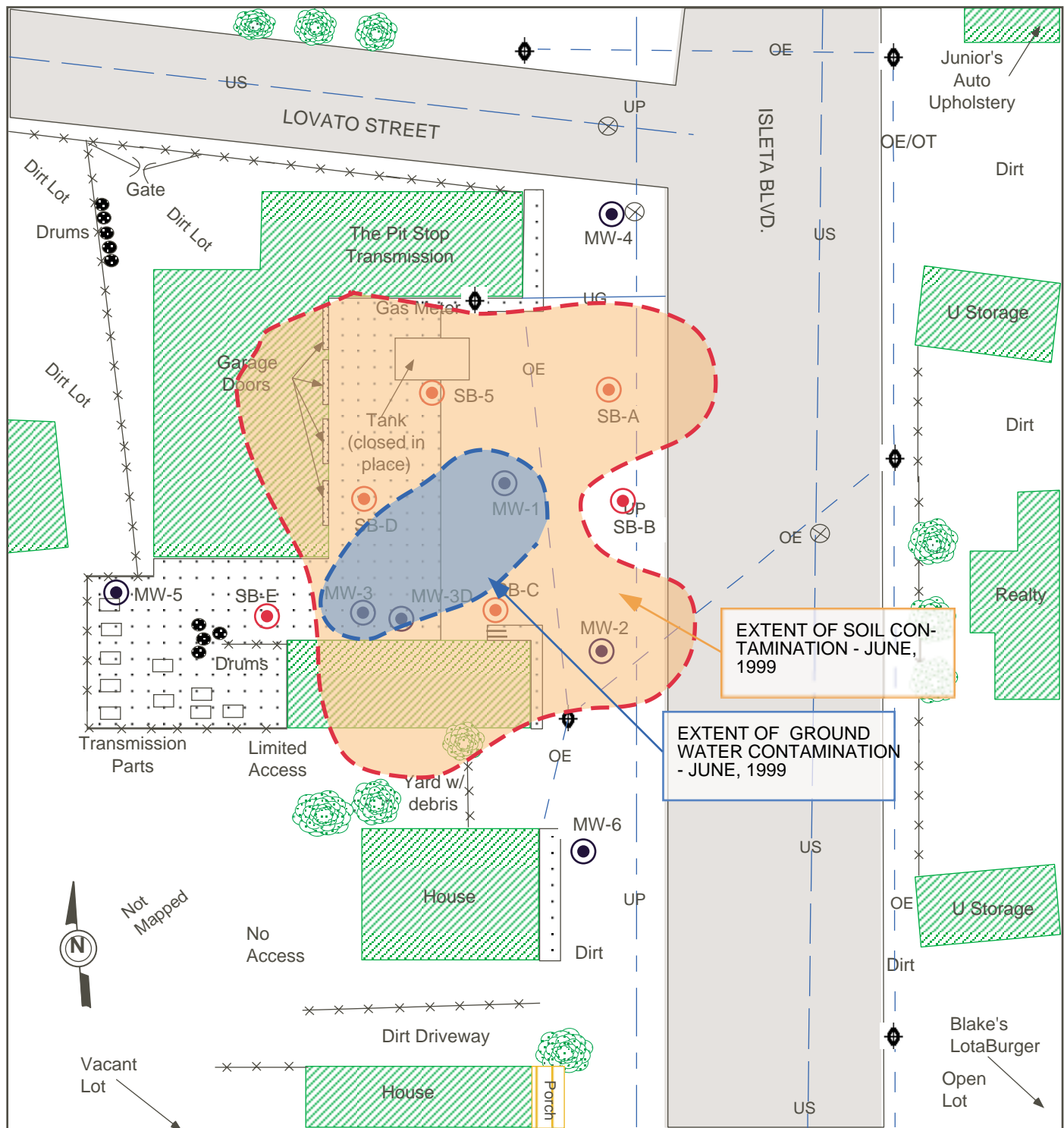
FEI/TPA recommends the implementation of a short-term AS/VE pilot test to evaluate remedial alternatives, the effects of short-circuiting, well spacing/zone(s) of influence, process water generation vs. applied vacuum, flow and vacuum responses, and off-gas emission concentration and composition. Data collected during the pilot test will be used to aid in design of the final reclamation system.

The pilot test will be conducted in two primary phases over a one-day period. Phase One will consist of in-situ VE testing on two newly installed high performance 4" diameter wells. In an effort to evaluate the effects of lithologic heterogeneity across the site, pilot testing will be conducted at two separate locations. Tentative test wells include VM-1 (primary test well) and VM-2 (see Figure 2B). Using strategically placed vadose/phreatic zone 1" diameter vacuum monitoring well clusters will allow measurement of vacuum responses and sparging effectiveness on a three dimensional basis during each portion of the pilot test. Phase One will be run for approximately four hours using wells VM-1 and VM-2 for approximately two hours each.

Phase Two will consist of operation of VM-1 and initiation of sparging into AS-1 for an approximate four hour period. In addition, during the sparge portion of the test, a tracer gas (helium or sulfur hexafluoride) will be injected into the sparging well at a known concentration. Samples will be collected from the VE well using a field detector to evaluate flow and travel time characteristics at the Site.

During the Phase One and Two portions of the test, four vapor samples will be collected in tedlar bags and sent to the laboratory for TPH and BTEX analysis using EPA method 8015 modified and 8021. In addition, three samples will also be analyzed for fixed gases (O₂, CO₂, N₂) and methane using standard EPA methodology.

Results of the pilot testing will be reported in the quarterly report following completion of the AS/VE test. At that time, and upon approval by the BCEHD and NMED, FEI/TPA will begin preparing a reclamation plan.



EXPLANATION:

- Monitor Well
- Soil Boring
- Building
- Concrete
- Tree
- Fence
- Utility Pole

UTILITIES

- Overhead Electric
- Underground Phone
- Underground Sewer
- Underground Gas

0 15 30ft
Scale

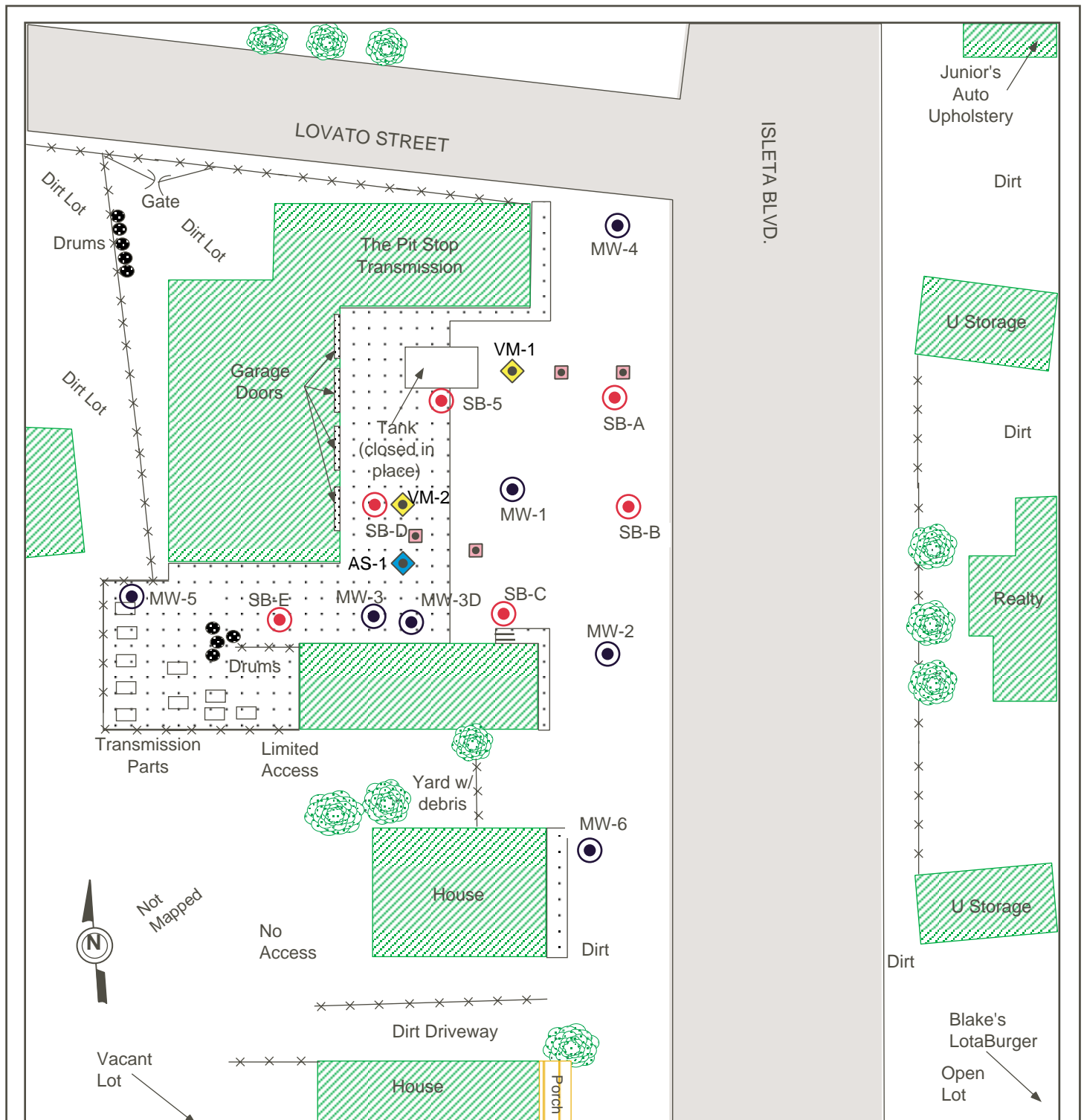
SITE MAP THE PIT STOP

305 Isleta SW, Albuquerque, New Mexico

Figure 2A
Historic Site map

FEI FAITH ENGINEERING, INC.





EXPLANATION:

- | | | | |
|--|--------------|--|--|
| | Monitor Well | | Proposed Air Sparging Well |
| | Soil Boring | | Proposed Dual Completion Pilot Test Well |
| | Building | | Proposed 4" Diameter Ve/ Monitor Well |
| | Concrete | | |
| | Tree | | |
| | Fence | | |
| | Utility Pole | | |
- 0 15 30ft
- Scale

SITE MAP

THE PIT STOP

305 Isleta SW, Albuquerque, New Mexico

Figure 2B

Proposed AS/VE Test Wells

FEI FAITH ENGINEERING, INC.



12/1/95•BJWR	0	NEW MEXICO CORRECTIVE ACTION FUND COST DETAIL FORM — SUMMARY SHEET	
Site Name: The Pit Stop		Site Address: 305 Isleta SW Albuquerque, NM 87105	
Circle only one:	Circle only one:	Phase 2 — Free Product / Saturated Soil Recovery	Phase 4 — Reclamation Implementation
<input type="checkbox"/> Work plan	<input type="checkbox"/> Claim	<input type="checkbox"/> Phase 1 — Hydrogeo Investigation	<input type="checkbox"/> Phase 3 — Reclamation Proposal
		<input type="checkbox"/> Phase 5 — Operations and Maintenance	
FIXED-PRICE CONTRACT FOR ALL TASKS IN PHASE 1 AND 5		NMED Use Only	
SUMMARY SHEET	TOTAL	Project Manager	Auditor
PROFESSIONAL SERVICES	\$11,760.00		
TAXABLE EXPENSES	\$3,318.25		
TAXABLE SUBCONTRACTORS	\$8,544.90		
TAXABLE SUBTOTAL	\$23,623.15		
NMGRT RATE 5.5625% X TAXABLE SUBTOTAL =	\$1,314.04		
TOTAL	\$24,937.19		
NONTAXABLE EXPENSES			
NONTAXABLE SUBCONTRACTORS			
NONTAXABLE SUBTOTAL			
GRAND TOTAL OF CLAIM	\$24,937.19		

12/1/95•BJWR

NEW MEXICO CORRECTIVE ACTION FUND COST DETAIL FORM — PROFESSIONAL SERVICES

Site Name: The Pit Stop**Site Address:** 305 Isleta SW
Albuquerque, NM 87105**Circle only one:**☒ **Work plan** ☐ **Claim****Circle only one:**☐ Minimum Site Assessment☒ Phase 1 — Hydrogeo Investigation☐ Phase 2 — Free Product /
Saturated Soil Recovery☐ Phase 3 — Reclamation Proposal☐ Phase 4 — Reclamation Implementation☐ Phase 5 — Operations and Maintenance

FIXED-PRICE CONTRACT FOR ALL TASKS IN PHASE 1 AND 5

NMED Use Only

PROFESSIONAL SERVICES	Invoice #	Rate	Unit	# of Units	Total	Project Manager	Auditor
initial sampling + 3 qtrs gw monitoring					\$7,100.00		
Pilot Testing					\$4,660.00		
SUBTOTAL					\$11,760.00		

NEW MEXICO CORRECTIVE ACTION FUND COST DETAIL FORM — EXPENSES

Site Name: The Pit Stop

Site Address: 305 Isleta SW
Albuquerque, NM 87105

Circle only one:

☒ **Work plan** ☐ **Claim**

Circle only one:

☐ Minimum Site Assessment☒ Phase 1 — Hydrogeo Investigation☐ Phase 2 — Free Product /
Saturated Soil Recovery☐ Phase 3 — Reclamation Proposal☐ Phase 4 — Reclamation Implementation☐ Phase 5 — Operations and Maintenance

FIXED-PRICE CONTRACT FOR ALL TASKS IN PHASE 1 AND 5

NMED Use Only

EXPENSES	Invoice #	Rate	Unit	# of Units	Total	Project Manager	Auditor
NONTAXABLE							
N/A							
NONTAXABLE SUBTOTAL							
TAXABLE							
initial sampling + 3 qtrs gw monitoring					\$2,182.50		
Pilot Testing					\$1,135.75		
TAXABLE SUBTOTAL					\$3,318.25		

